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Cognitive-behavioral therapy of patients with ptsd: literature review

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Abstract

Exposure therapy was the first one, which effectiveness was proved in psychological treatment of posttraumatic stress disorder (PTSD). However, studies have shown that this therapy was appropriate for some patients with PTSD, what caused the development of other models and therapies, among which the most important and effective are the theories of information processing and emotional processing. Studies have proved that cognitive-behavioral therapy (CBT) effectively reduces PTSD symptoms and accompanying depression, anxiety, giving similar results. CBT is a short-term therapy, and the achieved results are maintained afterwards. The main purpose of the PTSD cognitive-behavioral therapy is to reduce discomfort and improve the patient life. According to the authors of contemporary models of PTSD cognitive therapy, the patients' emotional involvement in traumatic memories makes a distorted cognitive content accessible and creates a base for its modification, using a combination of cognitive and behavioral techniques to help patients identify and modify distorted beliefs connected with PTSD. Lack of knowledge about change mechanisms, the most responsive to therapy symptoms, do not let to answer the question - whether PTSD cognitive-behavioral therapy will be the therapy of future. It depends on the fact if the current research results will help develop effective PTSD therapies methods. This presentation provides an overview of basic concepts, application principles, and research results on the effectiveness of PTSD cognitive-behavioral therapy.

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1. Introduction

Posttraumatic stress disorder (PTSD) was initially perceived as a complex phobia with symptoms

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characteristic for generalized anxiety. Currently it is known that PTSD appears as a result of some life-threatening events or acts of violence. People suffering from PTSD re-experience trauma very often have sleeping problems, feel alienated and indifferent. PTSD disorder co-occurs often with other mental disorders: depression, psychoactive substance abuse, problems with memory and cognitive functioning, and also affects social and family life.

One of the first theories dealing with PTSD was a learning theory, namely Mowrer's two-step theory. The theory assumed that the first step in the phobias development is anxiety learned, when a neutral stimulus is combined with a negative one. The second step is to learn avoiding behavior (Hembree, Foa, in: Reinecke, Clark, 2005). Rachman (1980) presented some limitations of that theory: It does not explain the thoughts and cognitive assessments associated to anxiety.

The second is model-based on exposure therapy proved its treatment efficacy. However, this model is not very successful, what caused the development of different cognitive approaches to PTSD treatment. Cognitive model and developed in its framework cognitive therapy combined with behavioral, offered a different view on PTSD disorder, its mechanisms and methods of treatment.

2. The Prevalence of PTSD

Currently more and more studies are conducted to clarify the prevalence of PTSD. For example, a survey of samples of Detroit residents has found that 11.3% suffered from PTSD (DSM-III-R) during the life (Breslau et al., 1991). In another research the spreading rate of PTSD was 7.8% (women - 10.4%, men - 5% in the NCS study (Kessler et al., 1995).).

Polish surveys of the PTSD prevalence has been carried out on samples of police officers and firefighters; on students and graduates; adults after a flood. These results are significantly different.

The prevalence of PTSD in Ukraine is presented in the Institute of Neurology, Psychiatry, Drugs UAS investigations: among all (100%) people who have experienced the complex trauma in the form of violence have all the symptoms of PTSD (56%), or just some of them (44%). Among the PTSD symptoms mostly were invasion and hiperactivation. Research of the women - victims of people trade, shows, that the PTSD symptoms were highest: in 60% - all symptoms of PTSD, 40% - only some of them. The survey of people who participated in the military actions or liquidation of the Chernobyl disaster in the past shows that in 19% of veterans in Afghanistan were revealed clinical PTSD, some PTSD symptoms - in 25%. Respectively, in 14% of liquidators of the Chernobyl accident PTSD was diagnosed, in 21% - some PTSD symptoms were present (Voloshin et al., http://www.likar.info/profi/articles/301.html accessed 30.06.2010).

3. PTSD Description

DSM-IV defines precise criteria for PTSD diagnosing (American Psychiatric Association, 1994).

People who are exposed to traumatic events are at increased risk for PTSD as well as for major depression, panic disorder, generalized anxiety disorder, and substance abuse, as compared with those who have not experienced traumatic events (Kessler et al., 1995). They may also have somatic symptoms and physical illnesses, particularly hypertension, asthma, and chronic pain syndromes (Zatzick et al., 1997).

Generally, to be given a diagnosis of PTSD, a person has to have been exposed to an extreme stressor or traumatic event to which he or she responded with fear, helplessness, or horror and to have three distinct types of symptoms consisting of:

1. re-experiencing of the event,
2. avoidance of reminders of the event,
3. and hyperarousal for at least one month (American Psychiatric Association, 1994).

Re-experiencing of the event refers to unwanted recollections of the incident in the form of distressing images, nightmares, or flashbacks. Symptoms of avoidance consist of attempts to avoid reminders of the event, including persons, places, or even thoughts associated with the incident. Symptoms of hyperarousal refer to physiological manifestations, such as insomnia, irritability, impaired concentration, hypervigilance, and increased startle reactions (North, Nixon, Shariat, et al., 1999). Within the first month after a traumatic experience, traumatized persons may meet the diagnostic criteria for acute stress disorder. Although acute stress disorder is not always followed by PTSD, it is associated with an increased risk of PTSD (Harvey, Bryant, 1998).

4. PTSD – the Risk Factors

Hidalgo and Davidson (2000) on the basis of a research review have indicated some risk factors for trauma exposure and PTSD risk factors. As a factor of the first group they have identified gender (men are more exposed to traumatic events (Kessler et al., 1995). Other mentioned factors are as follows: age, education background, features of the person with a personality disorder, psychiatric issues, mental illness in the family and prior/previous exposure to trauma.

McFarlane and Yehuda (1996) on the basis of the empirical studies have proposed a theoretical model of factors influencing the PTSD development: family history, personality, coping style, the reaction of the environment, life events. PTSD does not develop as a direct consequence of traumatic events, but arises from the acute distress, strong post-traumatic reaction (Lis-Turlejska, 2002).

Practice Guideline (2004) gives the following risk factors:

1. Age - Trauma exposure, and therefore PTSD, occurs in individuals of all ages. For all types of trauma, exposure varies with age (Breslau, Kessler, Chilcoat et al., 1998). Age, developmental stage and the extent of any emotional problems may be important considerations in treatment.
2. Gender - Although overall exposure to trauma may be somewhat greater in men than in women (Kessler, Sonnega, Bromet et al., 1995), men and women differ in the types of traumatic events to which they are most likely to be exposed (Kessler, Sonnega, Bromet et al., 1995, Breslau, Kessler, Chilcoat et al., 1998). Men are more likely to be exposed to combat and physical violence, whereas women are more likely to be exposed to rape and sexual assault. Differences in trauma exposures between men and women may affect treatment considerations.
3. History of previous traumas - Exposure to previous trauma may modify vulnerability to subsequent trauma, influence the development of PTSD (Ballenger, Davidson, Lecrubier et al., 2000; Breslau, Chilcoat et al., 1999), and complicate treatment and recovery.
4. Aggressive behavior - Kardiner (1941/ in: Ursano, 2004) noted that some patients with PTSD had problems with aggressive behavior that was frequently impulsive and episodic. More recent studies have documented increases in domestic violence, child abuse, and delinquency after disasters (Curtis, Miller, Berry, 2000).
5. Self-injurious and suicidal behaviors - The response to trauma exposure may include self-harming behaviors that range from self-mutilation to eating disorders, alcohol and other substances abuse (van der Kolk, Fisler, 1994; Hall, Tice, Beresford, Wooley, Hall, 1989; Amir, Kaplan, Efroni, Kotler, 1999; Grieger, Fullerton, Ursano, 2003/ in: Ursano et al. 2004). In fact, PTSD has demonstrated the strongest association with suicidal behaviors of any of the anxiety disorders (Kessler, 2000). In addition, individuals with PTSD appear to have an equal or greater odds ratio for making a suicide plan and for making impulsive suicide attempts, compared to those with mood disorders or other anxiety disorders (Kessler, Borges, Walters, 1999).

5. Cognitive Models

Foa E.B. and Riggs D.S. (1993) developed a theoretical basis for PTSD in the emotional processing theory framework, combining the model of learning with a cognitive model and Lang's theory of emotion.

Patients with PTSD could be characterized by two types of cognitive content:
1. they view the world as an exceptionally dangerous place;
2. they see themselves as particularly incompetent people.

A cognitive model of emotional disorders assumed that:
1. the way of thinking influence the life events interpretation and leads to certain emotional reactions. That's why people suffering from PTSD are characterized by a pathological / abnormal fear and anxiety that may appear when positive events are interpreted as threatening ones.

2. key beliefs influence the perception and interpretation of the information regarding the future/ coming trauma. Horowitz (1986), Frank and Stewart (1984) research proved that traumatic experiences disrupt key beliefs / cognitive schemas, forcing them to convert.
3. to modify key beliefs they should be matched to the previous schemes (assimilation) or adjusted to the schemes (accommodation) (Horowitz, 1986). The researches shown that assimilation is more typical than accommodation (Resick, Schnicke, 1992). Foa and Riggs (1993) have assumed that cognitive patterns of a person with trauma regarding the world and themselves before the trauma took place, are decisive whether the person will handle with the trauma or not.

A cognitive model of PTSD developed by Ehlers and Clark (2000) assumes that PTSD appears when the person is processing the trauma and its consequences in a way, which causes a sense of current threat. Then there are two key processes: 1. negative assessment of trauma and its consequences; 2. coding of traumatic event memories. The behavior of people and their ways of coping with trauma and its consequences often make the cognitive change impossible and maintain a disorder. A sense of threat is sustained by a negative appraisal of the traumatic event or its consequences, and post-traumatic behavior.

6. PTSD Treatment

Psychotherapy of PTSD is pictured by various approaches, which formulate different assumptions about the causes of PTSD and effective mechanisms of the PTSD treatment. There has been a significant development of the PTSD psychotherapy techniques in the last decade, primarily related to the cognitive-behavioral approach. The latest one include different varieties of exposure techniques, cognitive restructuring, anxiety control training and methods combining elements of all above mentioned techniques (Meadows, Foa, 2000)

For many years in psychology and psychiatry there has been a very popular opinion that the treatment of patients with PTSD by some form of exposure to traumatic situations is an effective method. The aim of that therapy is to assist patients in coping with fear-causing objects, situations, memories and images.

In case of PTSD exposure-based programs include exposures in the imagination, which has to help process the trauma emotionally by imagining and loud describing, and exposure in natural conditions, which through the confrontation with situations, actions causing anxiety, assisted processing (Hembree, Foa / in: Reinecke, Clark, 2005).

A treatment based on an extended exposure is usually applied in case of patients suffering on permanent post-traumatic stress and consists of 9-12 one-and-half-hour sessions. It's primary goal is to teach the patient how to reduce the PTSD symptoms.

Based on the assumptions of cognitive theory, an effective psychotherapy has to correct pathological elements of a cognitive anxiety structure (Foa, Kozak, 1986), or help organize traumatic memories and to allow modification of dysfunctional cognitive assumptions (Resick, Schnicke, 1992; Echlers, Clark, 2000). Other researchers found that traumatic events can disrupt or reinforce earlier patterns (Resick, Schnicke, 1992).

There are three factors of effective processing of traumatic events:

1. emotional commitment into the memory of traumatic events (through the victims, whose peak intensity of PTSD symptoms occurred shortly after the event, they recover from an illness more easily than those with a delayed reaction (Gilboa-Schechtman & Foa, 2001);
2. organization of traumatic narratives (chaos and time and space coherence, a lot of repetitions and unfinished sentences are not helpful);
3. correction of dysfunctional cognitive content, occurring immediately after the traumatic event.

A cognitive processing therapy was developed by Resick and Schnicke (1992):

- The basic assumption is: PTSD symptoms are caused by conflicts between new information provided by a traumatic event and earlier schemes.
- Cognitive therapy is focused on identifying and modifying these conflicts (Resick & Schnicke, 1992), namely in the following areas: a sense of security, trust, power, respect and sense of closeness (McCann et al., 1988).
- It consists of several successive stages: an education about PTSD and the theory of information processing, exposure, and cognitive therapy (Resick & Schnicke, 1992). Such a group therapy (6-8 persons) consists of 12 one-and-half-hour session. The first part is a written exposition (description of importance of a traumatic situation, identifying thoughts and emotions), next part – a strictly cognitive therapy (misconceptions identifying, challenging and modifications), with the support of homework.

The trauma-focused group psychotherapies just described typically share certain principles.

- The first sessions provide general psychoeducation regarding PTSD, coping skills for trauma reminders and PTSD reactions, and either anxiety-regulating or emotion-regulating techniques. They also provide group process exercises to improve group cohesion, openness, and tolerance.
- The trauma exposure sessions utilize different versions of prolonged narrative or exposure in imagination, moving from more general accounts to the most intense traumatic moments. They rely on group members' assisting each other in this difficult task.
- These sessions are generally followed by problem-solving sessions that address avoidant and aggressive behavior, secondary or current adversities, and developmental hindrances (Ursano, 2004).

7. Cognitive-Behavioral Therapy (CBT) in Practice

PTSD is understood by cognitive-behavioral therapists as a phenomenon of multifactorial conditions. Experiences, beliefs and knowledge of the people determine the way, how they see the signals from outside. Misinterpretation is supported by: behavior (eg, avoidance, forgetfulness), false beliefs about the world and themselves (such as "I am incompetent"), psychological (anxiety) and physical symptoms (somatic). The experience of trauma situation proves that the world is dangerous and the person is incompetent.

The main assumption of CBT is that patients with PTSD avoid thinking, discussing the situation, actions and memories connected with the trauma. The wrong way of events perception or interpretation leads to learn a non-adaptive behavior (Salkovskis, 1991).

The psychotherapy aim is to modify those behaviors through restructuring the content of thought. Therefore, CBT focuses on helping patients to understand processes and how they influence their thoughts, emotions and behavior, to re-assess a person's views regarding himselves and disorder.

A therapeutic intervention in the CBT approach focuses on the symptoms of PTSD, such as re-experiencing the trauma (intrusive thoughts, flashback, physiological reactions), avoiding activities (forgetfulness, avoidance), symptoms of excessive excitation (sleeping problems, over-sensitiveness and intense reaction to surprise/ astonishment) and that how a patient tries to interpret the traumatic event.

Both the style and the method of a therapeutic treatment are based directly on a classical CBT approach developed by A. Beck (1976):

- So cognitive therapy of patients with PTSD is an active, structuring, time-limited form of psychotherapy.
- A style of work includes a development by a therapist and a patient treatment plan and goals, and an active role of therapist and active participation of the patient.
- CBT techniques used in the treatment of PTSD are as follows: identifying thoughts and beliefs; showing the relationships between physical symptoms, thoughts, emotions and behavior; looking for the evidence for and against the righteousness of dysfunctional beliefs, assumptions, exposure, the alternative hypotheses creation.

Cognitive-behavioral therapy of PTSD starts with:

- a detailed interview with special attention to detail the nature and intrusive images, flashbacks and maintenance problem factors.
- education about the symptoms of the disorder is very important, as well as a rationale for asking the patient to recall painful experiences and relaxation training.
- after the therapist assesses the patient's ability to tolerate within-session anxiety and temporary exacerbations of symptoms, the patient is led through a series of sessions in which the traumatic event and its aftermath are imagined and described, and the patient is asked to focus on the negative affect and arousal until they subside.
- reassurance and relaxation exercises aid the patient in progressing through these sessions, and
- homework assignments allow the patient to practice outside the sessions or while confronting triggers of anxiety (specific places or activities) in vivo (Harvey, Bryant, Tarrier, 2003).

In a cognitive therapy – the distorted cognitive content is identified with the help of verbal discourse, its relevance is challenged, what can replace it with more rational and functional content. That is the advantage of cognitive therapy in comparison with the exposition, namely: it allows patient to confront conflicts and dysfunctional beliefs, not only by the memory activating, and gives the direct information, which corrects the dysfunctional cognitive beliefs (Resich, Schnicke, 1992).

Ehlers and Clark (2000) focus on the modification of cognitive evaluation of trauma and lasting

consequences of the traumatic events during the treatment. They indicate that exposure is a tool of the cognitive content modifying.

The most useful method in CBT is exposure – it gives the patient new piece of evidence, denying his thoughts and beliefs (e.g. thinking about the trauma is not threatening), and the accumulation of evidence leads to the weakening of catastrophic thoughts and interpretations (Reineckie, Clark, 2005).

Another mechanism for PTSD treatment based on the exposure and emotional processing theory, is the development and organization of the trauma narrative. Foa et al. (1986) found that the growth of organization of trauma narrative correlates with a patient's improvement. Ehlers and Clark (2000) found that trauma memory is poorly developed and insufficiently integrated with other experiences, and its revival combined with the cognitive therapy supports the process of its development and integration. However, several studies have noted that exposure may increase rather than decrease symptoms in some individuals (Tarrier et al., 1999).

Cognitive restructuring helps patients modify automatic thoughts and assumptions regarding the threat of feelings and situations. Patients realize that their worst fears are not inevitable with the help of checking the accuracy of their thoughts and beliefs. Cognitive restructuring results in an anxiety reduction (caused by both external and internal causes), and gives patients a sense of confidence, which leads them to engage in exposure.

8. Research on the Therapy Effects

In general, psychotherapy, examined across all types of interventions and for different types of victims, is an effective intervention for PTSD. Researches have demonstrated the effectiveness of such techniques as exposure therapy (helping patients confront painful memories and feelings), cognitive therapy (helping patients process their thoughts and beliefs), anxiety management, and interpersonal therapies (helping patients understand the ways in which the traumatic event continues to affect relationships and other aspects of their lives).

Sherman (1998) conducted a meta-analysis of 17 controlled clinical trials of psychotherapy for PTSD that included behavioral, cognitive, and psychodynamic individual and group therapy with veterans, female assault victims, and victims of other traumatic events. Psychotherapy was found to have a significant beneficial effect on PTSD.

Many studies have shown that a therapy based on exposure is an effective method that reduces the PTSD symptoms and its accompanying disorders (depression, anxiety). The state of war veterans with PTSD who were treated with exposure has improved in comparison with people from a waiting list for treatment (Keane et al., 1989). The state of women raped, treated with an extended exposure significantly improved (Foa et al., 1991).

A few studies have indicated that a brief cognitive-behavior therapy intervention in the acute posttraumatic phase can prevent PTSD while simultaneously treating ASD (Ursano, 2004)

Cognitive behavior therapy has often been combined with exposure therapy and shown to be effective (e.g. in a randomized, controlled study by Fecteau and Nicki (1999). Cognitive therapy techniques have not always been combined with exposure techniques, allowing for some comparison of these techniques.

Foa et al. (1991) studies of cognitive behavior therapy for PTSD have also examined outcomes for factors other than PTSD symptoms, such as anger. This study showed the specific clinical utility of a cognitive behavior treatment for anger as an adjunct to routine care, although no information was given on PTSD symptoms.

Group therapy may also be helpful in reducing isolation and stigma (Foa, Keane, Friedman, 2000). The trauma-focused group psychotherapy is especially effective in addressing this latter group of functional impairments. There were significant reductions in anger, depression, and symptoms of PTSD (Ursano, 2004).

Resick and Schnicke (1992) have researched the efficacy of group therapy of the cognitive processing in treatment of PTSD and depression in victims of rape: reductions of the PTSD symptoms were significant in comparison with the control group, treatment effects have been maintaining over a six months period after the therapy termination.

Tarrier et al. (1999) conducted a study comparing the relative efficacy of cognitive therapy and therapy based on exposure (in imagination). Therapy based on exposure in imagination and cognitive therapy are significantly and equally effective in the chronic PTSD treatment.

Marks et al. (1998) have conducted research on the effectiveness of treatment using different kinds of therapy: an extended exposure, cognitive restructuring, merger of these two therapies and the relaxation training. They have found that: 1. all these therapies are more effective than the relaxation training; 2. PTSD symptoms decreased more rapidly after treatment in patients using exposure or exposure in combination with cognitive

restructuring.

A limited number of well-designed studies demonstrate some success not only in speeding recovery but also in preventing PTSD when cognitive-behavior therapy is given over a few sessions beginning 2–3 weeks after trauma exposure (Marks et al, 1998; Tarrier et al, 1999).

Stress inoculation training involving breathing exercises, relaxation training, thought stopping, role playing, and cognitive restructuring has also proven effective alone and in combination with prolonged exposure in reducing PTSD symptoms (Hembree, Foa , 2000).

Many studies show that cognitive behavior therapy is effective in treating psychiatric disorders such as depression and PTSD, which can increase the risk for suicide, few studies have shown cognitive behavior therapy to be effective for reducing actual suicidal behavior and intent (Kessler et al, 1999).

There are more studies published that provide support for the effectiveness of treatment based on exposure rather than cognitive therapy, so the first one is now considered as the most effective in the treatment of chronic PTSD, and recommended as a primary intervention. But there are only three descriptions of research on the effectiveness of cognitive therapy published (Reineckie & Clarc, 2005).

9. Conclusions

1. The research on effects of treatment suggests that the therapy based on exposure and the cognitive therapy effectively reduces the symptoms of chronic PTSD, depression and anxiety. These results are obtained in different centers of PTSD and patients with various traumatic experiences psychotherapy. Most comparative studies demonstrated that patients treated with cognitive therapy, and therapy based on exposure obtained similar results, although the exposure is faster and gives more stable results, it is effective only if the patients are well-responsive to that therapy.
2. In general researchers of cognitive-behavioral therapy are unanimous to a certain level about most important factors for successful outcome of PTSD therapy: according to the emotional processing theory the base of anxiety symptoms reduction is a pathological change of cognitive structures (Foa & Kozak, 1986), in the cognitive approach the important role is assigned to need in join emotions with traumatic memories by the patient to access the content of cognitive distortion regarding PTSD (Ehlers & Clark, 2000); it is important to correct the information in order to modify the distorted / incorrect cognitive content.
3. The cognitive model of PTSD is one of the most important achievements of modern clinical psychology. Cognitive theory has many advantages: it is coherent, refers to cognitive psychology, pathological behaviors and experiences, has practical applications, and also allows to use the majority of existing information concerning PTSD. This approach is based on how people interpret the problem and the procedure of cognitive behavioral therapy, and it also takes expectations into its account. CBT has shown effectiveness in treating patients with PTSD, it is comparable to the treatment of exposure therapy. CBT can be easily integrated with other therapy methods, and such an integrated approach seems to guarantee maximum efficiency.
4. There is still a lack of knowledge regarding predictors of response to cognitive-behavioral therapy. To enrich the cognitive-behavioral theory further studies should be conducted on:
   - mechanisms of change;
   - relationship between individual differences in patients characteristics;
   - symptoms that best respond to specific interventions;
   - effectively matching of the elements of patient therapy.
   - early interventions and PTSD prevention
   - identification of risk factors for development of PTSD
   - treatment of specific symptoms or clinical concerns (Ursano, 2004).
5. Taking all the above into consideration, current cognitive theories used in PTSD therapy differ significantly from a traditional exposure-based therapy, but they very similar to approaches derived from the emotional processing theory. Cognitive theories assume that emotional involvement in traumatic memories and a cognitive content of pathological changes are inevitable to succeed in the therapy. It is necessary to conduct further studies to declare which method leads to achieve this goal the best.

The decision of using CBT in the PTSD treatment is a therapy of future depends whether further researches and obtained results will confirm the effectiveness of this therapy and especially in a large clinical practice.

References

American Psychological Association. (1994). Task Force on Promotion and Dissemination of Psychological Procedures. *A Report to the Division 12 Board of the American Psychological Association*. Washington, DC.

Ballenger J.C., Davidson J.R., Lecrubier Y., Nutt D.J., Foa E.B., Kessler R.C., McFarlane A.C., Shalev A.Y. (2000). Consensus statement on posttraumatic stress disorder from the International Consensus Group on Depression and Anxiety. *Journal of Clinical Psychiatry*, 61 (suppl 5), 60–66.

Beck, A.T.(1976). *Cognitive therapy and the emotional disorders*. New York: International Universities Press.

Breslau N., Kessler R.C., Chilcoat H.D., Schultz L.R., Davis G.C., Andreski P. (1998). Trauma and posttraumatic stress disorder in the community: the 1996 Detroit Area Survey of Trauma. *Archive of General Psychiatry,* 55, 626–632.

Breslau N., Davis G.C., Anderski P., Peterson E. (1991) Traumatic events and posttraumatic stress disorder in an urban population of young adults. *Archives of General Psychiatry*, 48, 218-228.

Curtis T., Miller B.C., Berry E.H. (2000). Changes in reports and incidence of child abuse following natural disasters. *Child Abuse and Neglect,* 24, 1151–1162

Ehlers A., Clark D.M. (2000). A cognitive model of persistent posttraumatic stress disorder. *Behavior Research and Therapy*, 38 (4), 319-345.

Foa E.B., Keane T.M., Friedman M.J. (2000). *Effective treatments for PTSD: practice guidelines from Internetional Society for Traumatic Stress Studies*. New York: Guilford Press.

Foa E.B., Kozak M.J. (1986). Emotional processing of fear: exposure to corrective information. *Psychol Bulletin,* 99, 20-35.

Foa E.B., Riggs D.S. (1993). Post traumatic stress disorder in rape victims. In: J. Oldham, M.B. Riba, A. Tasman (Eds.), *American Psychiatric Pres Review of Psychiatry. Volume 12.* Washington, DC: American Psychiatric Press. 273-303.

Foa E.B., Rothbaum B.O., Riggs D.S., Murdock T.B. (1991). Treatment of posttraumatic stress disorder in rape victims: a comparison between cognitive-behavioral procedures and counseling. *Journal of Consulting Clinical Psychology,* 59, 715–723

Frank E., Stewart B.D. (1984). Depressive symptoms in rape victims. *Journal of Affective Disorders*, 1, 269-277.

Gilboa-Schechtman E., Foa E.B. (2001). Patterns of recovery after trauma: the use of intraindividual analysis. *Journal of Abnorlmal Psychology*, 110 (3), 392-400.

Harvey AG, Bryant RA. (1998). The relationship between acute stress disorder and posttraumatic stress disorder: a prospective evaluation of motor vehicle accident survivors. *Journal of Consulting Clinical Psychology,* 66, 507-512.

Harvey AG, Bryant RA, Tarrier N. (2003). Cognitive behaviour therapy for posttraumatic stress disorder. *Clinical Psychology Review,* 23, 501–522.

Hembree E.A., Foa E.B. (2005). Cognitive change supporting in post-traumatic stress-disorder. In: Reinecke, M.A., Clark, D.A. (Eds.). *Cognitive Psychotherapy.* Gdańsk: GWP.

Hidalgo R.B., Davidson J.R.T. (2000). Posttraumatic Stress Disorder: Epidemiology and health-related considerations. *Journal of Clinical Psychiatry*, 61 (suppl.7), 5-13.

Horowitz M.J. (1986). *Stress Response Syndromes* (2). Northvale, New Jersey: Jason Aronson.

Keane T.M., Bairbank J.A., Caddell J.M., ZImering R.T. (1989). Implosive (flooding) therapy Edsuces symptoms of PTSD in Vietnam combat veterans. *Behavior therapy*, 20, 245-260.

Kessler R.C. (2000). Posttraumatic stress disorder: the burden to the individual and to society. *Journal of Clinical Psychiatry*, 61 (suppl 5), 4–12.

Kessler R.C., Borges G., Walters E.E. (1999). Prevalence of and risk factors for lifetime suicide attempts in the National Comorbidity Survey. *Archives of General Psychiatry*, 56, 617–626.

Kessler RC, Sonnega A, Bromet E, Hughes M, Nelson CB. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. *Archives of General Psychiatry,* 52, 1048-60.

Lis-Turlejska M. (2002). *Posttraumatic stress. Appearance, effects and treatment.* Warsaw: Wydawnictwo Akademickie "Żak".

Marks I., Lovell K., Noshirvani H., Livanou M., Thrasher S. (1998). Treatment of posttraumatic stress disorder by exposure and/or cognitive restructuring: a controlled study. *Archives of General Psychiatry,* 55, 317–325.

McCann I.L., Sakheim D.K., Abrahamson D.J. (1988). Trauma and victimization: a model of psychological adaptation. *Counseling Psychologist*, 16, 531-594.

McFarlane A.C., Yehuda R. (1996). Resilience, vulnerability and the course of posttraumatic reactions. In: B.A. Van der Kolk, A.C. McFarlane, L. Weisaeth (Eds.), *Traumatic stress: The effects of overwhelming experience on mind, body, and society*. New York: The Guilford Press, 155-181.

Meadows E.A., Foa E.B. (2000). Cognitive behavioral treatment for PTSD. In: A.Y. Shaley, R. Yehuda, A.C. McFarlane (Eds.), *International handbook of human response to trauma*. New York: Kluwer Academic Plenum Publishers. 337-346.

North C.S., Nixon S.J., Shariat S., Mallonee S., McMillen J.C., Spitznagel E.L., Smith E.M. (1999). Psychiatric disorders among survivors of the Oklahoma City bombing. *Journal of American Medical Association*, 282, 755–762.

Rachman S. (1980). Emotional processing. *Behavior Research and Therapy*, 9, 51-60.

Reinecke, M.A., Clark, D.A. (Eds.). (2005). *Cognitive Psychotherapy*. Gdańsk: GWP.

R. J. Ursano, M.D., Carl Bell, M.D., Spencer Eth, M.D., Matthew Friedman, M.D., Ph.D. Ann Norwood, M.D., Betty Pfefferbaum, M.D., J.D., Robert S. Pynoos, M.D., Douglas F. Zatzick, M.D., David M. Benedek, M.D.,(consultants). (2004). *Practice Guideline for the Treatment of Patients With Acute Stress Disorder and Posttraumatic Stress Disorder,* American Psychiatric Association.

Resick P.A., Schnicke M.K. (1992). Cognitive processing therapy for sexual assault victims. *Journal of Consulting and Clinical Psychology*, 60, 748-756.

Salkovskis, P.M. (1991). The importance of behaviour in the maintenance of anxiety and panic: a cognitive account. *Behavioral Psychotherapy*, 19, 6-19.

Sherman J.J.: Effects of psychotherapeutic treatments for PTSD: a meta-analysis of controlled clinical trials. J Trauma Stress 1998; 11:413–435

Tarrier N., Pilgrim H., Sommerfield C., Faragher B., Reynolds M., Graham E., Barrowclough C. (1999). A randomized trial of cognitive therapy

and imaginal exposure in the treatment of chronic posttraumatic stress disorder. *Journal of Consulting and Clinical Psychology*, 67, 13–18.

Voloshin P.V., Shestopalova L.F., Pidcorytov V.S., Maruta N.O., Bacherikov A.M., Panchenko O.A., Rachkauskas G.S., Bolotov D.M., Kozhevnikova V.A. Posttraumatic stress disturbances: diagnosis, treatment, reablement (Посттравматичні стресові розлади: діагностика, лікування, реабілітація). Institute of neurology, psychiatry and narcology of Ukraine AMS. http://www.likar.info/profi/articles/301.html. On 30.06.2010

Zatzick D.F., Weiss D.S., Marmar C.R., Metzler T.J., Wells K., Golding J.M., Stewart A., Schlenger W.E., Browner W.S. (1997) Post-traumatic stress disorder and functioning and quality of life outcomes in female Vietnam veterans. *Military Medicine*, 162, 661-5.